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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/241,413	02/02/1999	CHI HYUNG SONG	0465-0552P-S	8716

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

KOSTAK, VICTOR R

ART UNIT	PAPER NUMBER
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2614

20

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/241,413

Applicant(s)

SONG, CHI HYUNG

Examiner

Victor R. Kostak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-9 and 11-31 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 17-23 and 30 is/are allowed.
6) ☒ Claim(s) 4, 24-27, 29 and 31 is/are rejected.
7) ☒ Claim(s) 8, 9, 11-16 and 28 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. In light of the amendment overcoming the new matter rejection, the claims are now viewed differently from that previously, specifically in that the input and outputs are not determined but simply “recognized” or “identified” upon reception by the controller. As a result, the following rejection is now presented.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 4, 24-27, 29 and 31 are again rejected under 35 U.S.C. 102(e) as being anticipated by Donovan, in light of the proper reading of the amended of the claims, commented on above.

Regarding claim 31, Donovan (noting particularly Figs. 11 and 15) includes a controller 208 with convertor 206 which together first accept a selected input signal having a known format, and an output signal having a desired known output format (e.g. col. 9 lines 7-20), which is what applicant's controller does, as explained above. Donovan points out that the parameter determination of the two signals can be performed by a look-up table or by direct calculation (col. 9 lines 20-22). From these two signals a conversion equation is determined according to their respective parameters, and using conversion equations (equations (1) – (10) listed and explained in columns 11 – 14), as further specified in the description of Tables 1 and 2, and yet further described in table form in Tables D-1 and D-2 in the appendix. (It is further pointed out

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that “determining”, which applicant recites, does not require “calculating” or “deriving”. A “determining” process may only require the step of “selecting”. Yet, further, and as referred to above, Donovan allows for direct calculation as well as looking up parameter data.)

Because different scaling factors are determined (in response to recognizing the input and output signals), the conversion equation to be used is accordingly uniquely determined so defining the specific relationship between the input and output signals (further explicitly described in col. 14 lines 26-30). Regardless of the scaling factors being selected from a look-up table or from calculation (both of which Donovan allows), the conversion equation is still determined, thereby meeting claim 31.

As for claim 24, Donovan also specifies determining separate numerator and denominator parameters shown in Tables D-1 and D-2 as composite scaling factors defined explicitly by numerator and denominator components. Donovan discusses the conversion determination characterized as scaling factors defined by separate numerator and denominator in col. 11 line 23+, and convertor 206 serves as both the numerator generator and denominator generator controlled by signal 209 (col. 9 line 50+). Furthermore, direct calculation can be used to determine the parameters (noting again col. 9 lines 20-22), which parameters define the scaling factors as numerators and denominators.

As for claims 25 and 27, Donovan operates on the luminance as well as the chrominance components, noting Figs. 16, 23 and 24, for example.

Regarding claim 26, Fig. 14 shows a delay (line store) for the input luminance signal and continues to receive subsequent luminance data, and Donovan applies a calculated ratio defined by numerator M and denominator N (col. 11 line 23+), which relates the input value “a” to the

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desired output value “b” to the conversion elements (e.g. 208, 206), which one of ordinary skill in the art can consider or designate as “operand mapping” circuitry (Donovan also describes ALU elements in Fig. 11 for carrying out the conversion process).

As for claim 4, Donovan describes plural arrangements (Figs. 16, 22, 23) which include plural multiplexers for carrying out the conversion process involving the initial (delayed) input luminance and subsequent luminance signals that are processed according to the input and output operand values “a” and “b”.

As for claim 29, Donovan separately converts in the vertical dimension and then in the horizontal dimension by converting the lines per frame and then the pixels per line (e.g. col. 9 lines 55-59; col. 11 lines 29-30; col. 12 lines 7-9). The convertor controller 208 establishes the control signals for both the line conversion (i.e. vertical scaling) and the horizontal conversion (i.e. horizontal scaling), including the horizontal frequency and the frame rate (col. 9 lines 55-65). Therefore, convertor 206 serves as the claimed vertical format converting unit which determines the vertical mode and first operation unit which performs a first arithmetic operation (i.e. vertical scaling based on the determined conversion mode), and controlled by a first control unit 208 which determines the vertical operation conversion operation to obtain the desired output vertical format, and which controller configures (i.e. selects the appropriate vertical factors for the convertor).

Convertor 206 also serves as the claimed horizontal format converting unit in the subsequent conversion step, as it serves as the second operating unit which performs an arithmetic operation (i.e. horizontal scaling by pixel-per-line conversion), wherein the controller 208 serves as the second control unit for determining the horizontal conversion operation carried

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out by convertor 206 on the initially vertically-converted signal, based on the conversion mode, as which configures the convertor 206 to perform the horizontal conversion.

3. Applicant is once again informed that Hori and Gray (both of record) could be applied against his claims. In addition to those references, newly-cited Ito, Bae, Sano, Van Nostrand, Cahill III, Eglit and Mizutani et al. can all also be applied, as they too disclose converting from an input format to an output format using an equation based on determining conversion factors therefor.

4. Claims 8, 9, 11-23, 28 and 30 remain allowable over the prior art.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor R. Kostak whose telephone number is 703 305-4374. The examiner can normally be reached on Monday - Friday from 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 703 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

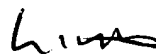
Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 308-HELP.



Victor R. Kostak
Primary Examiner
Art Unit 2614

VRK



JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600